

Name \_\_\_\_\_

## STUDY GUIDE Chapter 15: Genetic Engineering

1. Manipulating genetic material to produce desirable functions that would not occur naturally is called \_\_\_\_\_. The intentional breeding of organisms to produce offspring with certain desirable characteristics is called \_\_\_\_\_.
2. The continued breeding of individuals with similar desirable characteristics is called \_\_\_\_\_. The crossing of dissimilar individuals to bring together the best traits of both organisms is called \_\_\_\_\_.
3. Give an example of hybridization.
4. Explain a risk of inbreeding.
5. The manipulation of living organisms to produce useful products is called \_\_\_\_\_. It introduces mutations to \_\_\_\_\_ variation.
6. DNA produced by combining DNA from different sources is called \_\_\_\_\_. It is used to produce \_\_\_\_\_ organisms, which contain genes from different species.
7. Recombinant DNA often uses \_\_\_\_\_, which are small, circular pieces of DNA from \_\_\_\_\_.
8. Genetically identical organisms are grown from a single adult cell by \_\_\_\_\_. To do so, a/an \_\_\_\_\_ cell whose nucleus was removed is fused with a donor cell and implanted into a foster mother to develop.
9. Replacing an absent or faulty gene with a normal working one is called \_\_\_\_\_.
10. Sections of DNA that vary widely from one individual to another can be analyzed through \_\_\_\_\_.

**BE SURE TO COMPLETE THE BACK AS THE QUESTIONS THERE ARE WORTH HALF OF THE POINTS ON THE STUDY GUIDE!**

11. Explain 3 applications of genetic engineering in agriculture to produce less expensive and more nutritious food.

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12. Explain 3 applications of genetic engineering in the field of medicine.

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13. Explain 3 applications of DNA fingerprinting.

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14. Explain 5 pros of genetic engineering.

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15. Explain 5 cons of genetic engineering.

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